# Author Index


Adams-Campbell, L.L., Nwankwo, M.U., Ukoli, F.A., Omene, J.A., and Kuller, L.H. Serum retinol, carotenoids, vitamin E, and cholesterol in Nigerian women, 58

Agerbo, P., Jorgensen, B.M., Jensen, B., Borresen, T., and Holmer, G. Enzyme inhibition by secondary lipid autoxidation products from fish oil, 549

Aguilera, J.M.: *See* Amigo, L., 486

Agut, J.: *See* Coviella, I.L.G., 313

Akoh, C.C.: *See* Chapkin, R.S., 599

Alam, B.S. and Alam, S.Q. Diets containing N-3 fatty acids decrease the concentrations of arachidonic acid in phospholipids, free fatty acid, and diacylglycerol fractions of submandibular salivary glands, 609

Alam, S.Q.: *See* Alam, B.S., 609

Amigo, L., Marzolo, M.P., Aguilera, J.M., Hohlberg, A., Cortes, M., and Nervi, F. Influence of different dietary constituents of beans *(Phaseoulus vulgaris)* on serum and biliary lipids in the rat, 486

Apgar, J. Zinc and reproduction: an update, 266

Aponte, G.W.: *See* Scita, G., 118

Aranda, P.: *See* Ena, J.M., 498

Armand, M., Borel, P., Ythier, P., Dutot, G., Melin, C., Senft, M., Lafont, H., and Lairon, D. Effects of droplet size, triacylglycerol composition, and calcium on the hydrolysis of complex emulsions by pancreatic lipase: an in vitro study, 333

Asato, L.: *See* Yamamoto, S., 279

Atkinson, J.L.: *See* Johnston, W.L., 421

Aukema, H.M., Tomobe, K., Takahashi, H., and Holub, B.J. Altered renal diacylglycerol mass and fatty acid compositions in murine polycystic kidney disease: dietary effects, 491

Awad, A.B., Giancola, J.A., Fink, C.S., Horvath, P.J., and Bernardis, L. Effect of dietary fat on lipids and enzyme activities of rat hepatic membranes, 80

Baik, M.G., Choi, C.B., Slanger, W.D., and Park, C.S. The influence of energy restriction and developmental state on DNA 5-methyldeoxycytidine in rat mammary and liver tissues, 640

Baker, F.L.: *See* Laszlo, J.A., 531

Balaz, V.: *See* Knopp, J., 587

Ballard-Barbash, R.: *See* Berlin, E., 392

Bardes, E.S.-G.: *See* Coleman, R.A., 129

Barsoum, A.L.: *See* Kurl, R.N., 366

Beard, J.L.: *See* Smith, S.M., 167; Smith, S.M., 461

Beard, J.L. and Smith, S.H. Re-evaluation of apparent hypometabolism in iron-deficient rats, 298

Beare-Rogers, J.L.: *See* Ratnayake, W.M.N., 232

Beckett, P.R.: *See* Foster, A.R., 554

Behrens, W.A.: *See* Ratnayake, W.M.N., 232

Belleville, J.: *See* Khalifa, F., 224; Ulmann, L., 188

Ben-Amotz, A.: *See* Shlomai, P., 415

Benkirane, M.: *See* Verine, A., 664

Berdanie, C.D.: *See* McIntosh, M.K., 194

Berlin, E., Bhathena, S.J., Judd, J.T., Nair, P.P., Peters, R.C., Bhagavan, H.NN., Ballard-Barbash, R., and Taylor, P.R. Effects of omega-3 fatty acid and vitamin E supplementation on erythrocyte membrane fluidity, tocopherols, insulin binding, and lipid composition in adult men, 392

Bernardis, L.: *See* Awad, A.B., 80

Berner, Y.N.: *See* Sklan, D., 322

Bertrand, V.: *See* Khalifa, F., 224

Besancon, P.: *See* Zambonino Infante, J.L., 285

Bettger, W.J.: *See* Gaudette, D.C., 309

Bettger, W.J., Driscoll, E.R., and Karmiol, S. Selective depletion of nonesterified fatty acids in fetal bovine serum-supplemented culture medium by human fibroblasts proliferating in low-density culture, 349

Bhagavan, H.N.: *See* Berlin, E., 392

Bhathena, S.J.: *See* Berlin, E., 392; Werman, M.J., 605

Bills, N.D., Hinrichs, S.H., Morgan, R., and Clifford, A.J. Tissue folate levels in transgenic mice with tumors and in nontransgenic controls, 113

Bode, A.M., Miller, L.A., Faber, J., and Saari, J.T. Mitochondrial respiration in heart, liver, and kidney of copper-deficient rats, 668

Bohov, P.: *See* Knopp, J., 587

Bordoni, A., Tarozzi, G., and Turchetto, E. Effect of the dietary supplementation with a phosphatidylinositol metabolite, glycerophosphorylinositol, on $Na^+/K^+$ ATPase activity and body weight in normal rats, 8

Borel, P.: *See* Armand, M., 333

Borresen, T.: *See* Agerbo, P., 549

Bouziane, M.: *See* Ulmann, L., 188

Boyer, J.: *See* Verine, A., 664

Bray, T.M.: *See* Xu, Z., 326

Browning, J.D.: *See* Spurlock, M.E., 594

Brtko, J.: *See* Knopp, J., 587

Burnard, S.L.: *See* McMurchie, E.J., 13

Burri, B.J., Kutnink, M.A., and Neidlinger, T .R. Relationship of holofree and transthyretin-bound plasma retinol-binding protein levels with liver vitamin A in rats, 31

Butler, J.A.: *See* Vendeland, S.C., 359

Caillard, I. and Tome, D. Different routes for the transport of α-lactalbumin in the rabbit ileum, 653

Caldas, E.D. and Dorea, J.G. Cobalt-vitamin B-12 interrelationships in liver of fetuses and infants, 539

Calvo, M.: *See* Ena, J.M., 498

Caporiccio, B.: *See* Zambonino Infante, J.L., 285

Carroll, K.K.: *See* Sammam, S., 481

Cerklewski, F.L. Phytic acid plus supplemental calcium, but not phytic acid alone, decreases fluoride bioavailability in the rat, 87

Cha, Y.-N.: *See* Choi, Y.-J., 580

Chalmers, R.A.: *See* Davies, S.E.C., 523

Chang, S.-C., Chen, M.-L. Effects of dietary fat on lipid composition and iron uptake of intestinal brush-border membrane of rats, 135

Chapkin, R.S., Akoh, C.C., and Lewis, R.E. Dietary fish oil modulation of in vivo peritoneal macrophage leukotriene production and phagocytosis, 599

Chen, M.-L.: *See* Chang, S.-C., 135

Choi, C.B.: *See* Baik, M.G., 640

Choi, Y.-J., Lee-Kim, Y.C., Park, J.-S., and Cha, Y.-N. Enhancement of hepatic drug metabolism in 3-week-old pups by maternal feeding of n-3 polyunsaturated fatty acid diets, 580

Choi, Y.J., Woo, J.H., and Han, I.K. Effects of the cimaterol (CL 263,780) on growth and cellular metabolisms in the mammary gland of rats, 2

Christon, R., Fernandez, Y., Linard, A., Periquet, A., Deltour, P., and Mitjavila, S. Diet-induced structural and funcational modifications in the pig liver endoplasmic reticulum membrane: effect of polyunsaturated fatty acid deficiency, 510

Clifford, A.J.: *See* Bills, N.D., 113

Cohn, S.H. In vivo neutron activation analysis: a new technique in nutritional research, 378

Coleman, R.A., Hiremagalur, B.K., Trachman, J., Bardes, E.S.-G., Rao, P., and Patel, M.S. Alteration of enzymes of hepatic glycerolipid synthesis in artificially reared rat pups fed high carbohydrate and high fat diets, 129

Collins, T.D.: *See* Lin, G.W.-J., 182

Cook, M.E.: *See* Pimentel, J.L., 140; Pimentel, J.L., 146

# Author Index


Adams-Campbell, L.L., Nwankwo, M.U., Ukoli, F.A., Omene, J.A., and Kuller, L.H. Serum retinol, carotenoids, vitamin E, and cholesterol in Nigerian women, 58

Agerbo, P., Jorgensen, B.M., Jensen, B., Borresen, T., and Holmer, G. Enzyme inhibition by secondary lipid autoxidation products from fish oil, 549

Aguilera, J.M.: *See* Amigo, L., 486

Agut, J.: *See* Coviella, I.L.G., 313

Akoh, C.C.: *See* Chapkin, R.S., 599

Alam, B.S. and Alam, S.Q. Diets containing N-3 fatty acids decrease the concentrations of arachidonic acid in phospholipids, free fatty acid, and diacylglycerol fractions of submandibular salivary glands, 609

Alam, S.Q.: *See* Alam, B.S., 609

Amigo, L., Marzolo, M.P., Aguilera, J.M., Hohlberg, A., Cortes, M., and Nervi, F. Influence of different dietary constituents of beans *(Phaseoulus vulgaris)* on serum and biliary lipids in the rat, 486

Apgar, J. Zinc and reproduction: an update, 266

Aponte, G.W.: *See* Scita, G., 118

Aranda, P.: *See* Ena, J.M., 498

Armand, M., Borel, P., Ythier, P., Dutot, G., Melin, C., Senft, M., Lafont, H., and Lairon, D. Effects of droplet size, triacylglycerol composition, and calcium on the hydrolysis of complex emulsions by pancreatic lipase: an in vitro study, 333

Asato, L.: *See* Yamamoto, S., 279

Atkinson, J.L.: *See* Johnston, W.L., 421

Aukema, H.M., Tomobe, K., Takahashi, H., and Holub, B.J. Altered renal diacylglycerol mass and fatty acid compositions in murine polycystic kidney disease: dietary effects, 491

Awad, A.B., Giancola, J.A., Fink, C.S., Horvath, P.J., and Bernardis, L. Effect of dietary fat on lipids and enzyme activities of rat hepatic membranes, 80

Baik, M.G., Choi, C.B., Slanger, W.D., and Park, C.S. The influence of energy restriction and developmental state on DNA 5-methyldeoxycytidine in rat mammary and liver tissues, 640

Baker, F.L.: *See* Laszlo, J.A., 531

Balaz, V.: *See* Knopp, J., 587

Ballard-Barbash, R.: *See* Berlin, E., 392

Bardes, E.S.-G.: *See* Coleman, R.A., 129

Barsoum, A.L.: *See* Kurl, R.N., 366

Beard, J.L.: *See* Smith, S.M., 167; Smith, S.M., 461

Beard, J.L. and Smith, S.H. Re-evaluation of apparent hypometabolism in iron-deficient rats, 298

Beare-Rogers, J.L.: *See* Ratnayake, W.M.N., 232

Beckett, P.R.: *See* Foster, A.R., 554

Behrens, W.A.: *See* Ratnayake, W.M.N., 232

Belleville, J.: *See* Khalifa, F., 224; Ulmann, L., 188

Ben-Amotz, A.: *See* Shlomai, P., 415

Benkirane, M.: *See* Verine, A., 664

Berdanie, C.D.: *See* McIntosh, M.K., 194

Berlin, E., Bhathena, S.J., Judd, J.T., Nair, P.P., Peters, R.C., Bhagavan, H.NN., Ballard-Barbash, R., and Taylor, P.R. Effects of omega-3 fatty acid and vitamin E supplementation on erythrocyte membrane fluidity, tocopherols, insulin binding, and lipid composition in adult men, 392

Bernardis, L.: *See* Awad, A.B., 80

Berner, Y.N.: *See* Sklan, D., 322

Bertrand, V.: *See* Khalifa, F., 224

Besancon, P.: *See* Zambonino Infante, J.L., 285

Bettger, W.J.: *See* Gaudette, D.C., 309

Bettger, W.J., Driscoll, E.R., and Karmiol, S. Selective depletion of nonesterified fatty acids in fetal bovine serum-supplemented culture medium by human fibroblasts proliferating in low-density culture, 349

Bhagavan, H.N.: *See* Berlin, E., 392

Bhathena, S.J.: *See* Berlin, E., 392; Werman, M.J., 605

Bills, N.D., Hinrichs, S.H., Morgan, R., and Clifford, A.J. Tissue folate levels in transgenic mice with tumors and in nontransgenic controls, 113

Bode, A.M., Miller, L.A., Faber, J., and Saari, J.T. Mitochondrial respiration in heart, liver, and kidney of copper-deficient rats, 668

Bohov, P.: *See* Knopp, J., 587

Bordoni, A., Tarozzi, G., and Turchetto, E. Effect of the dietary supplementation with a phosphatidylinositol metabolite, glycerophosphorylinositol, on $Na^+/K^+$ ATPase activity and body weight in normal rats, 8

Borel, P.: *See* Armand, M., 333

Borresen, T.: *See* Agerbo, P., 549

Bouziane, M.: *See* Ulmann, L., 188

Boyer, J.: *See* Verine, A., 664

Bray, T.M.: *See* Xu, Z., 326

Browning, J.D.: *See* Spurlock, M.E., 594

Brtko, J.: *See* Knopp, J., 587

Burnard, S.L.: *See* McMurchie, E.J., 13

Burri, B.J., Kutnink, M.A., and Neidlinger, T .R. Relationship of holofree and transthyretin-bound plasma retinol-binding protein levels with liver vitamin A in rats, 31

Butler, J.A.: *See* Vendeland, S.C., 359

Caillard, I. and Tome, D. Different routes for the transport of α-lactalbumin in the rabbit ileum, 653

Caldas, E.D. and Dorea, J.G. Cobalt-vitamin B-12 interrelationships in liver of fetuses and infants, 539

Calvo, M.: *See* Ena, J.M., 498

Caporiccio, B.: *See* Zambonino Infante, J.L., 285

Carroll, K.K.: *See* Sammam, S., 481

Cerklewski, F.L. Phytic acid plus supplemental calcium, but not phytic acid alone, decreases fluoride bioavailability in the rat, 87

Cha, Y.-N.: *See* Choi, Y.-J., 580

Chalmers, R.A.: *See* Davies, S.E.C., 523

Chang, S.-C., Chen, M.-L. Effects of dietary fat on lipid composition and iron uptake of intestinal brush-border membrane of rats, 135

Chapkin, R.S., Akoh, C.C., and Lewis, R.E. Dietary fish oil modulation of in vivo peritoneal macrophage leukotriene production and phagocytosis, 599

Chen, M.-L.: *See* Chang, S.-C., 135

Choi, C.B.: *See* Baik, M.G., 640

Choi, Y.-J., Lee-Kim, Y.C., Park, J.-S., and Cha, Y.-N. Enhancement of hepatic drug metabolism in 3-week-old pups by maternal feeding of n-3 polyunsaturated fatty acid diets, 580

Choi, Y.J., Woo, J.H., and Han, I.K. Effects of the cimaterol (CL 263,780) on growth and cellular metabolisms in the mammary gland of rats, 2

Christon, R., Fernandez, Y., Linard, A., Periquet, A., Deltour, P., and Mitjavila, S. Diet-induced structural and funcational modifications in the pig liver endoplasmic reticulum membrane: effect of polyunsaturated fatty acid deficiency, 510

Clifford, A.J.: *See* Bills, N.D., 113

Cohn, S.H. In vivo neutron activation analysis: a new technique in nutritional research, 378

Coleman, R.A., Hiremagalur, B.K., Trachman, J., Bardes, E.S.-G., Rao, P., and Patel, M.S. Alteration of enzymes of hepatic glycerolipid synthesis in artificially reared rat pups fed high carbohydrate and high fat diets, 129

Collins, T.D.: *See* Lin, G.W.-J., 182

Cook, M.E.: *See* Pimentel, J.L., 140; Pimentel, J.L., 146

Cortes, M.: *See* Amigo, L., 486
Coviella, I.L.G., Agut, J., Ortiz, J.A., and Wurtman, R.J. Effects of orally administered cytidine 5′-diphosphate choline on brain phospholipid content, 313

daCosta, K.-A.: *See* Varela-Moreiras, G., 519
Davies, S.E.C., Woolf, D.A., Chalmers, R.A., Rafter, J.E.M., and Iles, R.A. Proton nmr studies of betaine excretion in the human neonate: consequences for choline and methyl-group supply, 523
Deaver, D.R.: *See* Smith, S.M., 461
Deltour, P.: *See* Christon, R., 510
Dintzis, F.R.: *See* Laszlo, J.A., 531
Dorea, J.G.: *See* Caldas, E.D., 539
Douglass, L.: *See* Pax, J., 342
Driscoll, E.R.: *See* Bettger, W.J., 349; Gaudette, D.C., 309
Dukes, G.E.: *See* Kandil, H.M., 442
Dutot, G.: *See* Armand, M., 333

Eastman, C.L. and Guilarte, T.R. Vitamin B-6, kynurenines, and central nervous system function: developmental aspects, 618
Eckel, L.: *See* Sammam, S., 481
Ena, J.M., Perez, M.D., Aranda, P., Sanchez, L. and Calvo, M. Presence and changes in the concentration of vitamin D-binding protein throughout early lactation in human and bovine colostrum and milk, 498

Faber, J.: *See* Bode, A.M., 668
Favilli, F.: *See* Stio, M., 104
Fernandez, Y.: *See* Christon, R., 510
Fink, C.S.: *See* Awad, A.B., 80
Fischer, P.W.F.: *See* Ratnayake, W.M.N., 232
Foster, A.R., Beckett, P.R., Rees, W.D., and Fuller, M.F. A sensitive isotopic assay for the measurement of lysine α-ketoglutarate reductase in cultured rat hepatocytes, 554
Fujibayashi, A.: *See* Hara, H., 176
Fuller, J.C., Jr., Link, G.A., Huiatt, T.W., Sell, J.L, and Nissen, S. Disparate responses of cultured skeletal muscle cells and growing chicks to tripeptide aldehyde protease inhibitors and an in vivo interaction with ethanol, 291
Fuller, M.F.: *See* Foster, A.R., 554
Funabiki, R., Yagasaki, K., Hara, H., Nyumura, N., Yoshizawa, F., and Saito, K. In vivo effect of L-leucine administration on protein synthesis in mice, 401

Gaudette, D.C., Driscoll, E.R., and Bettger, W.J. Dietary zinc deficiency alters the content and fatty acid composition of phosphatidylinositol bisphosphate ($PIP_2$) in the rat erythrocyte membrane, 309
Giancola, J.A.: *See* Awad, A.B., 80
Gibson, R.A.: *See* McMurchie, E.J., 13
Glanville, N.T.: *See* Johnston, W.L., 421
Glazier, C.E.: *See* Lonnerdal, B., 644
Goda, T., Takase, S., Yokogoshi, H., and Hoshi, T. Carbohydrate digestive capability in jejunum of rats subjected to simulated weightlessness, 172
Greger, J.L.: *See* Pimentel, J.L., 140; Pimentel, J.L., 146
Guilarte, T.R.: *See* Eastman, C.L., 618
Guthrie, N.: *See* Sammam, S., 481

Hak, L.J.: *See* Kandil, H.M., 442
Han, I.K.: *See* Choi, Y.J., 2
Hara, H.: *See* Funabiki, R., 401
Hara, H., Fujibayashi, A., and Kiriyama, S. Pancreatic protease secretion profiles after spontaneous feeding of casein or soybean protein diet in unrestrained conscious rats, 176
Hariu, Y.: *See* Kiriyama, H., 447
Hartmann, S.C.: *See* Schuette, S.A., 38
Hayashi, T.: *See* Okamato, Mikko, 241
Hermann, D.J.: *See* Kandil, H.M., 442
Hinrichs, S.H.: *See* Bills, N.D., 113
Hiremagalur, B.K.: *See* Coleman, R.A., 129
Hiremagalur, B.K., Johanning, G.L., Kalhan, S.C., and Patel, M.S. Alterations in hepatic lipogenic capacity in rat pups artificially reared on a milk-substitute formula high in carbohydrate or medium-chain triacylglycerides, 474
Hohlberg, A.: *See* Amigo, L., 486
Holmer, G.: *See* Agerbo, P., 549
Holub, B.J.: *See* Aukema, H.M., 491
Horvath, P.J.: *See* Awad, A.B., 80
Hoshi, T.: *See* Goda, T., 172
Hromadova, M.: *See* Knopp, J., 587
Huiatt, T.W.: *See* Fuller, J.C., Jr., 291

Iles, R.A.: *See* Davies, S.E.C., 523
Imura, H.: *See* Okamato, Mikko, 241
Inantomasi, T.: *See* Stio, M., 104
Inoue, G.: *See* Okamato, Mikko, 241
Isaacs, C.E., Litov, R.W., Marie, P., and Thormar, H. Addition of lipases to infant formulas produces antiviral and antibacterial activity, 304

Janghorbani, M.: *See* Schuette, S.A., 38
Jensen, B.: *See* Agerbo, P., 549
Johanning, G.L.: *See* Hiremagalur, B.K., 474
Johnston, W.L., Atkinson, J.L., and Glanville, N.T. Effect of PCPA or tryptophan on brain serotonin and on consumption of a high protein or high carbohydrate diet by rainbow trout, *Oncorhynchus mykiss*, 421
Jorgensen, B.M.: *See* Agerbo, P., 549
Joseph, P., Shivanandappa, T., and Krishnakumari, M.K. Influence of vitamin A on hexachlorocyclohexane (HCH) toxicity in the rat, 408
Judd, J.T.: *See* Berlin, E., 392

Kalhan, S.C.: *See* Hiremagalur, B.K., 474
Kandil, H.M., Hermann, D.J., Lu, J., Koruda, M.J., Sawyer, W.T., Dukes, G.E., and Hak, L.J. Effect of protein and calorie restriction on the cytochrome P-450 isozyme (P-450 IID6) activity in rats, 442
Karmiol, S.: *See* Bettger, W.J., 349
Khalifa, F., Bertrand, V., Belleville, J., Sarda, L., and Prost, J. Short term effect of feeding raw or heated soya flour and casein meals on lipid intestinal digestion and absorption in rat, 224
Kiriyama, H., Hariu, Y., and Sakata, T. Comparison of in vitro productives of short-chain fatty acids and gases from aldoses and the corresponding alcohols by pig cecal bacteria, 447
Kiriyama, S.: *See* Hara, H., 176
Kitts, D.D.: *See* Yuan, Y.V., 452
Klevay, L.M.: *See* Lynch, S.M., 387
Klimes, I.: *See* Knopp, J., 587
Knopp, J., Klimes, I., Brtko, J., Sebokova, E., Bohov, P., Hromadova, M., Langer, P., and Balaz, V. Nuclear 3,5,3′-triiodothyronine receptors and malic enzyme activity in liver of rats fed fish oil or cocoa butter, 587
Kono, S.: *See* Okamato, Mikko, 241
Koo, S.I., Lee, C.C., Stone, W.L., and Scott, R.L. Effect of copper deficiency on the plasma clearance of native and acetylated human low density lipoproteins, 45
Korin, T.: *See* Yamamoto, S., 279
Koruda, M.J.: *See* Kandil, H.M., 442
Kosaki, A.: *See* Okamato, Mikko, 241
Krishnakumari, M.K.: *See* Joseph, P., 408
Kubota, M.: *See* Okamato, Mikko, 241
Kuller, L.H.: *See* Adams-Campbell, L.L., 58
Kurl, R.N., Barsoum, A.L., and Sidransky, H. Association of poly(A)polymerase with tryptophan receptor in rat hepatic nuclei, 366
Kurowska, E.M.: *See* Sammam, S., 481
Kutnink, M.A.: *See* Burri, B.J., 31
Kuzuya, H.: *See* Okamato, Mikko, 241

L'Abbe, M.R.: *See* Ratnayake, W.M.N., 232
Lafont, H.: *See* Armand, M., 333
Lairon, D.: *See* Armand, M., 333

Langer, P.: *See* Knopp, J., 587
Laszlo, J.A., Dintzis, F.R., and Baker, F.L. $Ca^+$, $K^+$, and $Na^+$ content of corn bran during passage through pig gastrointestinal tract: Comparison with model predictions, 531
Lee, C.C.: *See* Koo, S.I., 45
Lee-Kim, Y.C.: *See* Choi, Y.-J., 580
Lewis, R.E.: *See* Chapkin, R.S., 599
Lien, E.L.: *See* Lonnerdal, B., 644
Lin, G.W.-J., McMartin, K.E., and Collins, T.D. Effect of ethanol consumption during pregnancy on folate coenzyme distribution in fetal, maternal, and placental tissues, 182
Linard, A.: *See* Christon, R., 510
Link, G.A.: *See* Fuller, J.C., Jr., 291
Litov, R.E.: *See* Isaacs, C.E., 304
Loerch, S.C.: *See* Oke, B.O., 62
Lonnerdal, B., Glazier, C.E., and Lien, E.L. Selenium supplementation of infant formula: uptake and retention of various forms of selenium in suckling rats, 644
Lu, J.: *See* Kandil, H.M., 442
Lukaski, H.C.: *See* Smith, S.M., 23
Lynch, S.M. and Klevay, L.M. Effects of a dietary copper deficiency on plasma coagulation factor activities in male and female mice, 387

McIntosh, M.K. and Berdanier, C.D. Influence of dehydroepiandrosterone (DHEA) on the thyroid hormone status of BHE/cdb rats, 194
McMartin, K.E.: *See* Lin, G.W.-J., 182
McMurchie, E.J., Burnard, S.L., Rinaldi, J.A., Patten, G.S., Neumann, M., and Gibson, R.A. Cardiac membrane lipid composition and adenylate cyclase activity following dietary eicosapentaenoic acid supplementation in the marmoset monkey, 13
Maeda, I.: *See* Okamato, Mikko, 241
Margalith, P.: *See* Shlomai, P., 415
Marie, P.: *See* Isaacs, C.E., 304
Marzolo, M.P.: *See* Amigo, L., 486
Melin, C.: *See* Armand, M., 333
Miller, L.A.: *See* Bode, A.M., 668
Mimouni, V.: *See* Ulmann, L., 188
Mitjavila, S.: *See* Christon, R., 510
Mokady, S.: *See* Shlomai, P., 415
Mongeau, R.: *See* Ratnayake, W.M.N., 232
Monis, B.: *See* Valentich, M.A., 67
Morgan, R.: *See* Bills, N.D., 113
Mori, M.: *See* Yamamoto, S., 279
Muriana, F.J.G.: *See* Ruiz-Gutierrez, 75
Muriana, F.J.G. and Ruiz-Gutierrez, V. Effect of n-6 and n-3 polyunsaturated fatty acids ingestion on rat liver membrane-associated enzymes and fluidity, 659
Murnane, M.J. and Tam, S.W. Isolation and characterization of RNA from snap-frozen tissues and cultured cells, 251

Nagamine, J.: *See* Yamamoto, S., 279
Nair, P.P.: *See* Berlin, E., 392
Neidlinger, T.R.: *See* Burri, B.J., 31
Nervi, F.: *See* Amigo, L., 486
Neumann, M.: *See* McMurchie, E.J., 13
Nicolosi, R.J.: *See* von Duvillard, S.P., 71
Nissen, S.: *See* Fuller, J.C., Jr., 291
Nwankwo, M.U.: *See* Adams-Campbell, L.L., 58
Nyumura, N.: *See* Funabiki, R., 401

O'Dell, B.L.: *See* Spurlock, M.E., 594; Sun, S.H.-H., 503
Ogunwole, J.O., Trout, D.L., and Osilesi, O. Perturbations of blood chemistry and after the short-term feeding of a fiber supplement in non-insulin dependent diabetic and non-diabetic subjects, 353
Okamoto, M., Okamoto, M., Kono, S., Inoue, G, Hayashi, T., Kosaki, A., Maeda, I., Kubota, M., Kuzuya, H., and Imura, H. Effects of a high-fat diet on insulin receptor kinase and the glucose transporter in rats, 241
Okamoto, Motozumi: *See* Okamato, Mikko, 241
Oke, B.O. and Loerch, S.C. Effects of energy and amino acid supply to the small intestine on amino acid metabolism, 62
Omene, J.A.: *See* Adams-Campbell, L.L., 58
Ortiz, J.A.: *See* Coviella, I.L.G., 313
Osilesi, O.: *See* Ogunwole, J.O., 353

Park, C.S.: *See* Baik, M.G., 640
Park, J.-S.: *See* Choi, Y.-J., 580
Patel, M.S.: *See* Coleman, R.A., 129; Hiremagalur, B.K., 474
Patten, G.S.: *See* McMurchie, E.J., 13
Pax, J., Douglass, L., and Sampugna, J. Effects of linolenic and trans fatty acids on neonatal survival of C57BL/6 mice, 342
Pejoan, C.: *See* Zambonino Infante, J.L., 285
Perez, M.D.: *See* Ena, J.M., 498
Periquet, A.: *See* Christon, R., 510
Peters, R.C.: *See* Berlin, E., 392
Pimentel, J.L., Cook, M.E., Greger, J.L. Anemia induced by ingestion of excess zinc in chicks: importance of red blood cell turnover?, 146
Pimentel, J.L., Greger, J.L., Cook, M.E., and Stahl, J.L. Iron metabolism in chicks fed various levels of zinc and copper, 140
Poisson, J.-P.: *See* Ulmann, L., 188
Prohaska, J.R., Sunde, R.A., and Zinn, K.R. Livers from copper-deficient rats have lower glutathione peroxidase activity and mRNA levels but normal liver selenium levels, 429
Prost, J.: *See* Khalifa, F., 224

Rabinowitch, H.D.: *See* Sklan, D., 322
Radhakrishnamurthy, R.: *See* Thakur, M.L., 217
Rafter, J.E.M.: *See* Davies, S.E.C., 523
Rao, P.: *See* Coleman, R.A., 129
Ratnayake, W.M.N., Behrens, W.A., Fischer, P.W.F., L'Abbe, M.R., Mongeau, R., Beare-Rogers, J.L. Chemical and nutritional studies of flaxseed (variety Linott) in rats, 232
Rees, W.D.: *See* Foster, A.R., 554
Reeves, P.G. and Rossow, K.L. Exposure to excessive parenteral Zn and/or cisplatin affects trace element metabolism and enzyme activities in reproductive tissues and kidney of male rats, 467
Rinaldi, J.A.: *See* McMurchie, E.J., 13
Rossow, K.L.: *See* Reeves, P.G., 467
Rouanet, J.-M.: *See* Zambonino Infante, J.L., 285
Ruiz-Gutierrez, V.: *See* Muriana, F.J.G., 659
Ruiz-Gutierrez, V. and Muriana, F.J.G. Effects of ingestion of thermally oxidized frying oil on desaturase activities and fluidity in rat-liver microsomes, 75

Saari, J.T.: *See* Bode, A.M., 668
Saito, K.: *See* Funabiki, R., 401
Sakata, T.: *See* Kiriyama, H., 447
Sammam, S., Kurowska, E.M., Guthrie, N., Eckel, L. and Carroll, K.K. Effects of dietary minerals on cholesterol metabolism in rabbits fed cholesterol-free atherogenic diets, 481
Sampugna, J.: *See* Pax, J., 342
Sanchez, L.: *See* Ena, J.M., 498
Sarda, L.: *See* Khalifa, F., 224
Sardesai, V.M. Biochemical and nutritional aspects of eicosanoids, 562
Nutritional role of polyunsaturated fatty acids, 154
Sato, I.: *See* Yin, S., 633
Sawyer, W.T.: *See* Kandil, H.M., 442
Schuette, S.A., Hartmann, S.C., Ting, B.T.G., and Janghorbani, M. Feasibility of measuring organ magnesium turnover in vivo by continuous feeding of a stable isotope, 38
Schulz, A.R. Nutrient-response: a long random walk through metabolic pathways, 98
Scita, G. The stability of B-carotene under different laboratory conditions, 124
Scita, G., Aponte, G.W., and Wolf, G. Uptake and cleavage of B-carotene by cultures of rat small intestinal cells and human lung fibroblasts, 118
Scott, R.L.: *See* Koo, S.I., 45
Sebokova, E.: *See* Knopp, J., 587

Selhub, J.: *See* Varela-Moreiras, G., 519
Sell, J.L.: *See* Fuller, J.C., Jr., 291
Senft, M.: *See* Armand, M., 333
Shinjo, S.: *See* Yamamoto, S., 279
Shivanandappa, T.: *See* Joseph, P., 408
Shlomai, P., Ben-Amotz, A., Margalith, P., and Mokady, S. Utilization of a natural B-carotene stereoisomers mixture from the fungus *Phycomyces blakesleeanus* as a source of vitamin A and B-carotene in rats' diet, 415
Sidransky, H.: *See* Kurl, R.N., 366
Sklan, D., Berner, Y.N., and Rabinowitch, H.D. The effect of dieatry onion and garlic on hepatic lipid concentrations and activity of antioxidative enzymes in chicks, 322
Slanger, W.D.: *See* Baik, M.G., 640
Smith, S.H.: *See* Beard, J.L., 298; Smith, S.M., 167
Smith, S.M., Deaver, D.R., and Beard, J.L. Metabolic rate and thyroxine monodeiodinase activity in iron-deficient female Sprague-Dawley rats: Effects on the ovarian steroids, 461
Smith, S.M., Smith, S.H., and Beard, J.L. Heart norepinephrine content in iron deficiency anemia, 167
Smith, S.M. and Lukaski, H.C. Estrous cycle and cold stress in iron-deficient rats, 23
Spurlock, M.E., Browning, J.D., and O'Dell, B.L. Low zinc status in guinea pigs and chicks has no effect on reassembly rate of brain microtubules, 594
Srivastava, U.S.: *See* Thakur, M.L., 217
Stahl, J.L.: *See* Pimentel, J.L., 140
Stio, M., Inantomasi, T., Favilli, F., Vincenzini, M.T., and Treves, C. Effect of a rickets-inducing diet and vitamin D metabolites [25-OH-$D_3$ and 1,25$(OH)_2D_3$] on transmembrane transport systems in rat kidney, 104
Stone, W.L.: *See* Koo, S.I., 45
Stucchi, A.F.: *See* von Duvillard, S.P., 71
Sun, S.H.-H. and O'Dell, B.L. Elevated striatal levels of glial fibrillary acidic protein associated with neuropathology in copper deficient rats, 503
Sunde, R.A.: *See* Prohaska, J.R., 429

Takahashi, H.: *See* Aukema, H.M., 491
Takase, S.: *See* Goda, T., 172
Tam, S.W.: *See* Murnane, M.J., 251
Tarozzi, G.: *See* Bordoni, A., 8
Taylor, P.R.: *See* Berlin, E., 392
Terpstra, A.H.M.: *See* von Duvillard, S.P., 71
Thakur, M.L., Van, T.T., Srivastava, U.S., and Radhakrishnamurthy, R. Protein and RNA biosynthesis in various cellular fractions of the brain of undernourished rats, 217
Thormar, H.: *See* Isaacs, C.E., 304
Ting, B.T.G.: *See* Schuette, S.A., 38
Tomé, D.: *See* Caillard, I., 653
Tomobe, K.: *See* Aukema, H.M., 491
Trachman, J.: *See* Coleman, R.A., 129
Treves, C.: *See* Stio, M., 104
Trout, D.L.: *See* Ogunwole, J.O., 353
Trumbo, P.R. Bioavailability of pyridoxine in rats fed various levels of casein, 543
Turchetto, E.: *See* Bordoni, A., 8

Ukoli, F.A.: *See* Adams-Campbell, L.L., 58
Ulmann, L., Bouziane, M., Mimouni, V., Belleville, J., and Poisson, J.-P. Relationship between rat liver microsomal Δ6 and Δ5 desaturase activities and fatty acid composition: comparative effects of coconut and salmon oils during protein restriction, 188

Valentich, M.A. and Monis, B. Effects of essential fatty acid deficiency on gamma-glutamyltranspeptidase activity of rat pancreas, 67
Valette, A.: *See* Verine, A., 664
Van, T.T.: *See* Thakur, M.L., 217
Varela-Moreiras, G., Selhub, J., da-Costa, K.-A., and Zeisel, S.H. Effect of chronic choline deficiency in rats on liver folate content and distribution, 519
Vendeland, S.C., Butler, J.A., and Whanger, P.D. Intestinal absorption of selenite, selenate, and selenomethionine in the rat, 359
Verine, A., Benkirane, M., Valette, A., and Boyer, J. Pattern of response to feeding and fasting of heparin-releasable lipoprotein lipase in rat cardiomyocytes, 664
Vincenzini, M.T.: *See* Stio, M., 104
von Duvillard, S.P., Stucchi, A.F., Terpstra, A.H.M., and Nicolosi, R.J. The effect of dietary casein and soybean protein on plasma lipid levels in cebus monkeys fed cholesterol-free or cholesterol-enriched semipurified diets, 71

Wang, M.-F.: *See* Yamamoto, S., 279
Werman, M.J. and Bhathena, S.J. The effect of low dietary zinc in copper-deficient rats fed high fructose diet, 605
Whanger, P.D.: *See* Vendeland, S.C., 359; Xia, Y., 202; Xia, Y., 211
Wolf, G.: *See* Scita, G., 118
Woo, J.H.: *See* Choi, Y.J., 2
Woolf, D.A.: *See* Davies, S.E.C., 523
Wurtman, R.J.: *See* Coviella, I.L.G., 313

Xia, Y., Zhao, X., Zhu, L., and Whanger, P.D. Distribution of selenium in erythrocytes, plasma, and urine of Chinese men of different selenium status, 211
Metabolism of selenate and selenomethionine by a selenium-deficient population of men in China, 202
Xu, A. and Bray, T.M. Effects of increased microsomal oxygen radicals on the function and stability of cytochrome P450 in dietary zinc deficient rats, 326

Yagasaki, K.: *See* Funabiki, R., 401
Yamaguchi, K.: *See* Yin, S., 633
Yamamoto, S., Korin, T., Mori, M., Asato, L., Shinjo, S., Nagamine, J., and Wang, M.-F. Influence of time lag in amino acid absorption on nitrogen retention in rats, 279
Yin, S.Y., Sato, I., and Yamaguchi, K. Comparison of selenium level and glutathione peroxidase activity in tissues of vitamin $B_6$-deficient rats fed sodium selenite of DL-selenomethionine, 633
Yokogoshi, H.: *See* Goda, T., 172
Yoshizawa, F.: *See* Funabiki, R., 401
Ythier, P.: *See* Armand, M., 333
Yuan, Y.V. and Kitts, D.D. Effect of dietary calcium intake and protein source on calcium utilization and bone biomechanics in the spontaneously hypertensive rat, 452

Zambonino Infante, J.L, Rouanet, J.-M., Caporiccio, B., Pejoan, C., and Besancon, P. Nutritional rehabilitation of malnourished rats by di- and tripeptides: nitrogen metabolism and intestinal response, 285
Zeisel, S.H.: *See* Varela-Moreiras, G., 519
Zhao, X.: *See* Xia, Y., 202; Xia, Y., 211
Zhu, L.: *See* Xia, Y., 202; Xia, Y., 211
Zinn, K.R.: *See* Prohaska, J.R., 429

# Subject Index


Absorption, 279
Acinar cell culture, 2
Acute oral toxicity, 408
Affinity chromatography, 519
α-lactalbumin, 653
Alam and Alam, 609
α-linolenic acid, 232
Alkaline phosphatase, 80
Amino acids, 62, 279
Aminopyrine demethylase, 326
Anemia, 140, 146, 167, 298
Angiotensin converting enzyme, 467
Arachidonic acid, 609
Artificial rearing, 129, 474
α-tocopherol, 392

β-carotene stereoisomers, 415
Bean intake, 486
Beta-carotene, 118, 124
Beta-carotene stability, 124
Betaine, 523
BHE/cdb rats, 194
Bile acids, 481
Biliary lipids, 486
Bioavailability, 87, 452, 531, 543
Blacks, 58
Blood, 211
Body weight, 8
Bone biomechanics, 452
Brain, 217
Brush-border membrane, 135
Buthionine sulfoximine, 359

Calcium, 87
Calcium uptake, 510
Calorie, 442
Cancer, 113
Carbohydrate, 421
Cardiac membranes, 13
Cardiac mitochondria, 668
Carotenoids, 58
Casein , 224, 481
Cattle, 62
CDP-choline, 313
Cell culture, 349
Cellular fractions, 217
Chick, 140, 146
Chicks, 291, 594
Cholesterol, 45, 58, 71, 322, 481
Choline, 313, 519, 523
Cimaterol, 2
Co, 539
Coconut oil, 188
Cold stress, 298
Colostrum, 498
Conscious rat, 176
Copper, 140, 146, 387, 467
Copper deficiency, 45, 429, 503, 605, 668
Cultured rat hepatocytes, 554
Cytidine, 313
Cytochrome P450 and P420, 326
Cytochrome P-450 products, 562

DBP, 498
Deficiency, 154
Desaturase activities, 75, 659
Dextromethorphan, 442
DHEA, 194
Diacylglycerol, 491
Diacylglycerols, 609
Di and tripeptides, 285
Dietary lipid, 491
Diet, 266
Dietary calcium level, 452
Dietary choline deficiency, 519
Dietary fat, 135
Dietary fiber, 531
Dietary lipid, 13
Dietary modification, 562
Dietary protein, 71, 176
25-Dihydroxyvitamin $D_3$, 104
Disaccharidase, 172
Disulfides, 322
DL-selenomethionine, 633
Dopamine, 313
Double bond index of liver microsome lipids, 580
Droplet size, 333
Drug oxidation and glucuronidation, 580
*Dunaliella bardawil,* 415

*E. coli,* 304
Eicosapentaenoic acid, 13
Elemental diet, 279
Emulsion, 333
Endogenous substrates, 241
Endoplasmic reticulum enzyme activities, 510
Energy restriction, 640
Enzyme ontogeny, 129
Epididymis, 467
Erythrocyte, 309
Erythrocytes and plasma, 202
Essential fatty acid deficient rats, 67
Essential fatty acids, 154
Estradiol, 461
Ethanol, 182
Evening primrose oil, 659
Exocrine pancreas, 176

Factor V, 387
Factor VIII, 387
Fat diet, 587
Fatty acid composition, 188
Fatty acids, 135
Fe-59, 140
Fermentation, 447
Fetus, 182
Fetuses, 539
FFA, 609
Fiber, 486
Fiber supplement, 353
Fibroblasts, 118, 349
Fish oil, 80, 392, 599
Flax, 232
Flaxseed, 232
Flaxseed fiber, 232
Fluoride, 87
Folate, 113, 519
Folate coenzymes, 182
Folate polyglutamates, 519
Food intake, 421
Formaldehyde, 62
Free radical generating system/agent, 326
Fructose, 605
Functions, 154

Gamma-glutamyltranspeptidase, 67
Garlic, 322, 562
Gas-release, 447
GDP binding, 298
Gel filtration, 202, 211
Gestation, 182
Glial fibrillary acidic protein, 503
Glucose 6-phosphatase, 549
Glucose transporter, 241
Glutathione, 322, 359
Glutathione peroxidase, 202, 211, 429, 633
Glycemic control, 353
Glycerolipid biosynthesis, 129
Glycerophosphorylinosiotol, 8
Glycosylated hemoglobin, 353
Guinea pigs, 594

Heart hypertrophy, 167
Heart lipoprotein lipase, 664
Heparin, 664
Hepatic lipogenesis, 474
Hepatic nuclei, 366
Herpes simplex virus-1, 304
Hexachlorocyclohexane, 408
High-carbohydrate formula, 129
High-fat diet, 241
HPLC, 519
Human, 539
Humans, 202
Hydrolysis, 333
25-Hydroxyvitamin $D_3$, 104

Indirect calorimetry, 461
Infant formula, 304, 644
Inhibitors, 291
Inositol, 8
Insulin, 401
Insulin receptor, 241, 392
Intestinal absorption, 359
Intestinal enzymes and morphology, 285
Intestine, 653
In vitro, 333
Ion exchange, 531
Iron, 140, 467
Iron deficiency, 167
Iron uptake, 135
Isotopic enzyme assay, 554

Keshan disease, 202
Kidney, 467, 491

Lactation, 498, 543
Large intestine, 447

Leucine, 401
Leukotriene, 599
Leukotrienes, 562
Linolenic acid, 342
Lipases, 304
Lipemic control, 353
Lipid absorption, 224
Lipid composition, 510
Lipid digestion, 224
Lipid peroxidation, 549
Lipids, 80
Lipogenesis, 2
Lipolysis, 2
Lipoproteins, 71, 481
Lipoxins, 562
Liver, 31, 75, 80, 241, 539, 659
Liver and mammary development, 640
Liver desaturases, 188
Liver enzymes, 429
Liver glycogen, 172
Liver perfusion, 580
Liver triiodothyronine receptors, 587
Low density lipoproteins, 45
Low protein diet, 491
Lysine, 554
Lysine α-ketoglutarate reductase, 554

Macrophage, 599
Male, 266
Malic enzyme, 587
Mammary gland, 2, 498
Marine fish oil, 659
Marmoset monkey, 13
MDA, 326
Medium-chain triacylglycerides, 474
Medium-chain triacylglycerol, 129
Membrane, 510
Membrane fluidity, 75, 392, 510, 659
Membrane lipid, 13
Membranes, 80, 313
Membrane transport, 104
Men, 211
Metabolic pathways, 98
Metabolic rate, 298
Metabolism, 62
Metallothionein, 467
Methylation, 523
5-Methyldeoxycytidine, 640
Mg deficiency, 38
Mg turnover, 38
Mice, 387
Micellar solution, 124
Microsomes, 549
Microtubule reassembly, 594
Milk, 498
Milk-substitute formulas, 474
Minerals, 481
Mitochondrial respiration, 668
Mouse, 491
Mouse pup survival, 342
Muscle, 241
Muscle cell culture, 291
Muscle proteolysis, 291
n-3 and n-6 fatty acid diets, 580
n-3 fatty acid, 392
n-3 fatty acids, 232, 609
n-6 fatty acid, 392

$Na^+/K^+$ ATPase, 8
Neonate, 523
Neuropathology, 503
Nitrogen retention, 279
Non-esterified fatty acids, 349
Norepinephrine, 298
Norepinephrine synthesis, 167
Nutrient-response, 98
Nutrition, 523
Nutritional adaptation, 285
Nutritional state, 664

Oil thermal oxidation, 75
*Oncorhynchus mykiss*, 421
Onion, 322

Pancreas, 67
Pancreatic lipase, 333
Pancreatic protease, 176
Paracellular absorption, 452
Paracellular pathway, 653
Parturition, 266
P-chlorophenylalanine, 421
Peptide chain elongation, 401
Peptidyl puromycin, 401
Phagocytosis, 599
Phosphatidylinositol, 8
Phospholipids, 80, 313, 609
*Phycomyces blakesleeanus*, 415
Physiological state, 353
Phytic acid, 87, 232
Pig, 447, 510
Plasma insulin, 474
Poly(A)polymerase, 366
Polycystic kidney disease, 491
Polyphosphoinositides, 309
Polyunsaturated (essential) fatty acids, 510
Post-supplementation effect, 353
Pregnancy, 266
Probability theory, 98
Progesterone, 461
Prostanoids, 562
Protein, 217, 421, 442
Protein absorption, 653
Protein restriction, 188
Protein synthesis, 401
Protein synthetic activity, 2
Proton NMR spectroscopy, 523
Pyridoxine, 543

Rabbits, 481
Rainbow trout, 421
Rat, 224, 503, 543, 640, 664
Rat kidney, 104
Rat liver mRNA, 429
Rat neonates, 474
Rats, 31, 75, 279, 298, 408, 594, 633, 659
Refeeding, 285
Requirements, 154
Retinoic acid, 118
Retinol, 58, 118
Retinol-binding protein, 31
Rickets-inducing diet, 104
RNA, 217

Salivary glands, 609
Salmonella enteritidis, 304
Salmon oil, 188
Sapogenins, 486
Selenate, 359
Selenite, 359, 633
Selenium, 211, 429, 633, 644
Selenium deficiency, 202
Selenium retention, 644
Selenium supplementation, 644
Selenomethionine, 359
Serotonin, 421
Serum, 664
Serum cholesterol, 486
Sex characteristics, 387
Short-chain fatty acids, 447
SHR, 452
Simulated weightlessness, 172
Small intestinal cells, 118
SOD, 322
Soya flour, 224
Stable Mg isotopes, 38
*Staphylococcus epidermidis*, 304
Starch, 62
Streptozotocin-induced diabetes, 401
Stress, 172
Striatal copper, 503
Striatal dopamine, 503
Suckling rats, 129
Sugar alcohols, 447
Superoxide dismutase, 146
Swine, 531
Synthesis, 217

Temperature regulation, 23
Testis, 467
Thermogenesis, 23, 461
Thermoregulation, 298
Thrombosis, 387
Thyroid hormones, 23, 461
Thyroixine, 194
Thyroxine 5′-deiodinase, 194
Thyroxine monodeiodinase, 23
Total folates, 182
Trans fatty acids, 342
Transgenic mice, 113
Trans-nonenal, 549
Triglyceride, 333
Triiodothyronine, 194
Trimethylselenium, 211
Tryptophan, 366, 421
Tryptophan receptor, 366
′Tubulin, 594
20:5 n-3, 13

Undernourished rats, 217
Urine, 211

Vitamin A, 31, 58, 408
Vitamin $B_{12}$, 539
Vitamin $B_6$, 543, 633
Vitamin C, 562
Vitamin D-binding protein, 498
Vitamin E, 562

Xenobiotic metabolizing enzymes, 408

Zinc, 140, 146, 467, 605
Zinc deficiency, 594
Zn deficiency, 309, 326